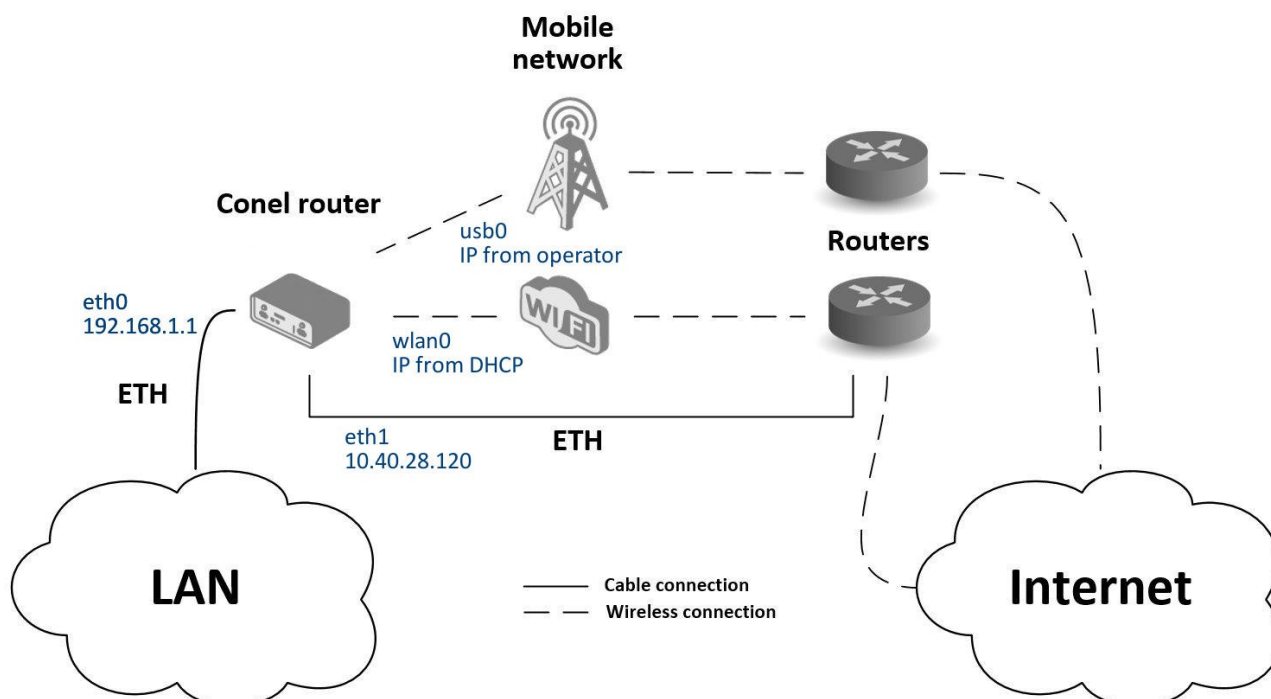


Backed Up Access to the Internet from LAN - Typical Situation



In the situation on the figure it's necessary to configure all the connections to the Internet in items LAN for Ethernet, WLAN and WiFi for WiFi connection and Mobile WAN for mobile connection. Then it is possible to configure the priorities of backup routes in the Backup Routes item.

LAN configuration

In the LAN item – Primary LAN – you can leave the factory default configuration as in the previous situation. The ETH1 interface on the front panel of the router is used for connection to the Internet. It can be configured in Secondary LAN. Connect the cable to the router and set appropriate values as in the figure – here static IP address, default gateway and DNS server are configured. Changes will take effect clicking on the Apply button. Detailed configuration of LAN is described in LAN Configuration.

Status	Primary LAN	Secondary LAN
General		
Mobile WAN		
WiFi		
WiFi Scan		
Network		
DHCP		
IPsec		
DynDNS		
System Log		
Configuration		
LAN		
VRRP		
Mobile WAN		
PPPoE		
WiFi		

	Primary LAN	Secondary LAN
DHCP Client	disabled	disabled
IP Address	192.168.1.1	10.40.28.120
Subnet Mask	255.255.255.0	255.255.252.0
Bridged	no	no
Media Type	auto-negotiation	auto-negotiation
Default Gateway		10.40.30.1
DNS Server		192.168.2.27
<input checked="" type="checkbox"/> Enable dynamic DHCP leases		
IP Pool Start	192.168.1.2	
IP Pool End	192.168.1.254	
Lease Time	600 sec	

WLAN and WiFi configuration

It's necessary to enable wlan0 network interface in the WLAN item, see figure. Check the Enable WLAN interface, set the Operating Mode to station (STA), enable the DHCP client and fill in the default gateway and DNS server for accessing the Internet. Click the Apply button to confirm the changes. For details see WLAN Configuration.

Status	
General	
Mobile WAN	
WiFi	
WiFi Scan	
Network	
DHCP	
IPsec	
DynDNS	
System Log	

Configuration	
LAN	
VRRP	
Mobile WAN	
PPPoE	
WiFi	
WLAN	
Backup Routes	
Firewall	

Status	
<input checked="" type="checkbox"/> Enable WLAN interface	
Operating Mode	station (STA)

DHCP Client	enabled
IP Address	
Subnet Mask	
Bridged	no

Default Gateway	192.168.3.1
DNS Server	192.168.3.1

<input type="checkbox"/> Enable dynamic DHCP leases	
IP Pool Start	
IP Pool End	
Lease Time	0 sec

Apply

Status	
General	
Mobile WAN	
WiFi	
WiFi Scan	
Network	
DHCP	
IPsec	
DynDNS	
System Log	

Configuration	
LAN	
VRRP	
Mobile WAN	
PPPoE	
WiFi	
WLAN	
Backup Routes	
Firewall	
NAT	
OpenVPN	
IPsec	
GRE	
IPsec	

<input checked="" type="checkbox"/> Enable WiFi	
Operating Mode	station (STA)
SSID	WiFiNetwork
Broadcast SSID	enabled
Probe Hidden SSID	<input type="checkbox"/>
Country Code *	
HW Mode	IEEE 802.11b
Channel	0
BW 40 MHz	<input type="checkbox"/>
WMM	<input type="checkbox"/>
Authentication	WPA2-PSK
Encryption	AES
WEP Key Type	ASCII
WEP Default Key	1
WEP Key 1	
WEP Key 2	
WEP Key 3	
WEP Key 4	
WPA PSK Type	ASCII passphrase
WPA PSK	WiFiPassword

Configure connection to a WiFi network in the WiFi item, see figure. Here check the Enable WiFi and fill in the data for connection (SSID, security, password) and confirm clicking the Apply button. For detailed configuration see WiFi Configuration.

To verify successful WiFi connection, see Status section, WiFi item. There will be wpa_state=COMPLETED written out if connected successfully.

Mobile WAN configuration

To configure the mobile connection it is sufficient to insert the SIM card into the SIM1 slot and attach the antenna to the ANT connector as in previous situation (depending on used SIM card). For using the system of backup routes it's necessary to enable check of connection in the Mobile WAN item, see figure. Set the Check connection option to enabled + bind and fill in an IP adress of e.g. operator's DNS server or any other surely available server and time interval of the check. For detailed configuration see Mobile WAN Configuration.

Status	Create connection to mobile network	
General	Primary SIM card	Secondary SIM card
Mobile WAN	APN *	
WiFi	Username *	
WiFi Scan	Password *	
Network	Authentication	PAP or CHAP ▼
DHCP	IP Address *	
IPsec	Phone Number *	
DynDNS	Operator *	
System Log	Network Type	automatic selection ▼
	PIN *	
	MRU	1500 bytes
	MTU	1500 bytes
	DNS Settings	get from operator ▼
	DNS Server	
	(The feature of check connection to mobile network is necessary for uninterrupted operation)	
	Check Connection	enabled + bind ▼
	Ping IP Address	8.8.8.8
	Ping Interval	60 sec

Backup Routes configuration

Finally configure the priorities of the backup routes. The eth1 wired connection has the highest priority in this situation. In case of failure, the second priority has WiFi wlan0 network interface, and then the mobile connection – usb0 network interface. See figure for corresponding settings of the Backup Routes item. System of backup routes has to be activated by checking the Enable backup routes switching item. Then enable backup routes switching at every backup route used and set up the priorities. Click the Apply button to confirm the changes. For detailed configuration see Backup Routes Configuration.

Status	Configuration
General	<input checked="" type="checkbox"/> Enable backup routes switching
Mobile WAN	<input checked="" type="checkbox"/> Enable backup routes switching for Mobile WAN Priority: 3rd
WiFi	<input type="checkbox"/> Enable backup routes switching for PPPoE Priority: 1st Ping IP Address: <input type="text"/> Ping Interval: <input type="text"/> sec
WiFi Scan	<input checked="" type="checkbox"/> Enable backup routes switching for WiFi STA Priority: 2nd Ping IP Address: <input type="text"/> Ping Interval: <input type="text"/> sec
Network	<input type="checkbox"/> Enable backup routes switching for Primary LAN Priority: 1st Ping IP Address: <input type="text"/> Ping Interval: <input type="text"/> sec
DHCP	<input checked="" type="checkbox"/> Enable backup routes switching for Secondary LAN Priority: 1st Ping IP Address: <input type="text"/> Ping Interval: <input type="text"/> sec
IPsec	
DynDNS	
System Log	

The router configured this way now serves to computers in LAN for backed up access to the Internet. You can verify the configured network interfaces in the Status section in the Network item. There you should see active network interfaces eth0 (connection to LAN), eth1 (wired connection to the Internet), wlan0 (WiFi connection to the Internet) and usb0 (mobile connection to the Internet). IP addresses and other data are included. At the bottom you can see the Route Table and corresponding changes of it when e.g. wired connection fails or cable disconnected (default route changes to wlan0). And the same – if WiFi is not available, the mobile connection will be used.

Backup routes are working even if not activated in the Backup Routes item, but with implicit priorities of network interfaces set as factory default. These priorities are different from the ones desired in this situation, see Backup Routes Configuration.

Vedi nota applicativa Conel

<http://support.conel.cz/support/solutions/articles/3000025526-backed-up-access-to-the-internet-from-lan-typical-situation>